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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/008,334

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Lin Xu

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EXAMINER

AVELLINO, JOSEPH E

ART UNIT

PAPER NUMBER

2143

MAIL DATE

DELIVERY MODE

07/03/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/008,334

Applicant(s)

XU ET AL.

Examiner

Joseph E. Avellino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-28 are pending in this application.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-12, 15-22, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brachman et al. (USPN 6,704,576) (hereinafter Brachman) in view of Zhang et al. (USPN 6,741,575) (hereinafter Zhang).

1. Referring to claim 1, Brachman discloses a method for effectively using network resources (e.g. abstract), comprising:

forwarding to a reception group a service (i.e. broadcast) corresponding to said reception group (i.e. those users wishing to receive the broadcast are considered within the reception group) (Figure 5, ref. 715);

upon a change in the cellular distribution of the reception group (i.e. a user leaves the broadcast), deciding whether a subset of said reception group should receive said service via a unicast link or via a multicast link (i.e. if more than one person is requesting the same data, the transmission is converted from unicast to a multicast transmission) (Figure 3; col. 5, line 66 to col. 6, line 2; col. 7, lines 20-25);

wherein the change in the cellular distribution of the reception group comprises a change in one or more cells with which one or more members of the reception group have a relationship (i.e. a new user joins the reception group, and therefore must join a cell), wherein the determining takes into account relationship information retrieved from one or more members of the reception group, wherein the relationship information comprises indication of one or more cells with which the one or more members are capable of communicating (i.e. any transmission from the member would inherently indicate at least one cell that the member is capable of communicating with, since otherwise the member would be unable to contact the server) (Figure 2; col. 5, line 58 to col. 6, line 19).

Brachman does not specifically disclose that the change in cellular distribution of the reception group comprises a user establishing a relationship with one or more first cells, and severing a relationship with one or more second cells, rather the use of a cold start user joining a reception group (see above). In analogous art, Zhang discloses another system for multicasting data in a cellular environment which discloses a subscriber unit (SU) is capable of entering a new cell either by cold start or roaming, which is the term in the art used for roaming into a new cell and severing relationships with the previous cell (col. 2, line 64 to col. 3, line 14; col. 12, lines 18-51). It would have been obvious to one of ordinary skill in the art to combine the teaching of Zhang with Brachman in order to achieve a seamless integration of cellular networks with the global Internet by supporting mobile and multicast IP services in cellular networks as supported by Zhang (col. 4, lines 3-7).

2. Claim 2 is rejected for similar reasons as stated above. Furthermore Brachman discloses the change does not result in there being no terminals in the reception group (i.e. the addition of a user to the group) (col. 5, line 66 to col. 6, line 2).

3. Claim 3 is rejected for similar reasons as stated above. Furthermore, Brachman discloses the selecting and deciding are performed upon a change in the physical location of a member of said group (this limitation can be construed that since the user is new, it originally had no location in the network, and therefore upon joining, now has a location in the group) (col. 5, line 66 to col. 6, line 2).

4. Claims 4 and 5 are rejected for similar reasons as stated above. Furthermore Brachman discloses the step of deciding further comprises determining the ideality of each option (i.e. if there are no users in the cell requesting the same content, then use the unicast link) (col. 5, line 58 to col. 6, line 19).

5. Claims 6-12 are rejected for similar reasons as stated above..

6. Referring to claim 15, Brachman discloses the deciding takes into account the bandwidth used and the per-unit-cost of that bandwidth (i.e. cost versus reliability and the speed of delivery) (col. 8, lines 31-40).

7. Claim 16 is rejected for similar reasons as stated above.
8. Referring to claim 17, Brachman discloses said deciding takes into account the percentage of total available link bandwidth used and the percentage of terminals using the link that would be served by using the bandwidth (i.e. if a threshold amount of cells has been reached, then convert the content to an RF broadcast) (Figure 2, ref. 240).
9. Claim 18 is rejected for similar reasons as stated above.
10. Referring to claim 19, Brachman discloses receiving a join indication from a terminal (i.e. a new user requests content) (Figure 2, ref. 205).
11. Claim 20 is rejected for similar reasons as stated above.
12. Referring to claim 21, Brachman discloses the join indication comprises a specification of the terminal's network interfaces (i.e. any request for content must inherently include the address of the sender, otherwise there would be no way to send the content back to the requestor, in the packet network of Brachman, the address identifies the network interface of the client) (col. 2, lines 62-67).
13. Referring to claim 22, Brachman discloses the join indication comprises a specification of the networks currently available to the terminal (i.e. any request for

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content must include the address of the sender, which would indicate to the receiver what networks are available to the terminal, since the request must come over at least one network) (col. 2, lines 62-67).

14. Claims 25 and 26 are rejected for similar reasons as stated above.

Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brachman-Zhang in view of Stanforth (U.S 2002/0058502).

15. Referring to claim 13, Brachman-Zhang discloses the invention substantively as described in claim 1. Brachman furthermore discloses the deciding takes into account the bandwidth used (col. 5, lines 60-65). Brachman-Zhang does not specifically disclose taking into account the spectral spectrum efficiency factor of each access system. In analogous art, Stanforth discloses another method of effectively using network resources which discloses utilizing spectral efficiency factor as a way to improve wireless communications (p. 1, ¶ 5). It would have been obvious to one of ordinary skill in the art to combine the teachings of Stanforth with Brachman-Zhang in order to improve spectral efficiency by interconnecting various differing access networks via the use of gateways as supported by Stanforth (p. 3, ¶ 13).

16. Claim 14 is rejected for similar reasons as stated above.

Claims 23, 24, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brachman-Zhang in view of Kahn et al. (US 2002/0143951) (hereinafter Kahn).

17. Regarding claims 23 and 24, Brachman-Zhang discloses the invention substantively as described in the claims above. Brachman-Zhang does not specifically disclose the join indication comprises a desired start or stop time for reception of transmissions. In analogous art, Khan discloses another method for effectively using network resources which discloses the use of IGMP join message **[0027-0030]**, which by definition includes: a) group address (networks available), b) a designated router or a way to determine a designated router; and c) the multicast address that identifies a particular transmission session, (session by definition have a start time and an ending time). It would have been obvious to one of ordinary skill in the art to combine the teaching of Kahn with Brachman-Zhang in order to utilize the advantages of multicast transmission while reducing the network load associated with that type of transmission as supported by Kahn (p. 2, ¶ 9).

18. Claims 27 and 28 are rejected for similar reasons as stated above.

Response to Argument

19. Applicant's arguments submitted May 17, 2007 have been fully considered but are not persuasive.

20. In the remarks, Applicant argues, in substance, that (1) Brachman-Zhang does not disclose that the determining takes into account relationship information retrieved from one or more members of the reception group, wherein the relationship information comprises indication of one or more cells with which the one or more members are capable of communicating.

21. As to point (1), Applicant is incorrect. Brachman discloses that the member requests content via the wireless network. This inherently discloses to the system which cell the member is capable of communicating with, otherwise the member would be unable to request a transmission. Furthermore a simulcast may be established wherein data may be distributed on multiple frequencies via multiple base stations (i.e. cells) (col. 6, line 43 to col. 7, line 15). The system would inherently need to receive information regarding what cell the user can communicate with in order to make this determination. By this rationale, the rejection is maintained.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

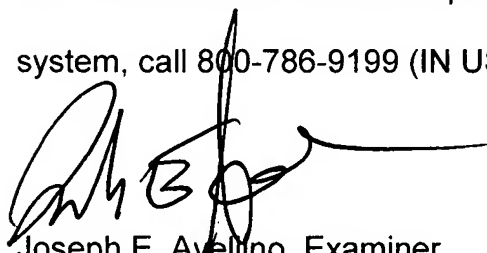
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Joseph E. Avellino, Examiner
May 18, 2007